



Application Number: 09/759,524  
Attorney Docket Number: 07303.0031

**IN THE CLAIMS:**

Please cancel claims 1-16, 30, 49, and 53-75 without prejudice or disclaimer of the subject matter thereof; amend claims 17, 32, and 36; and add new claims 80 and 81 as follows:

17. (Amended) A stage assembly for manufacturing semiconductor wafers, comprising:

a stage to position at least one substrate, the stage being moved by a force generator in response to a wafer manufacturing control system;

a base supporting the stage, the base being allowed to move in response to a reaction force generated by the force generator;

at least one bearing to support the base allowing the base to move relative to a stationary surface; and

at least one actuator to control movement of the base, the movement being caused by at least one of a disturbance force and the reaction force, the at least one actuator comprising an actuator disposed adjacent to a side outer surface of the base to generate a correction torque.

32. (Amended) The stage assembly of claim 30, wherein the first actuator generates the first correction force acting in a first direction passing through a center of gravity of the base, and the second actuator generates the second correction force acting in a second direction passing through the center of gravity of the base, and the actuator

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disposed adjacent to the side outer surface of the base generates the correction torque around a third direction.

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36. (Amended) A stage assembly for manufacturing semiconductor wafers, comprising:

a stage to position at least one substrate, the stage being moved in accordance with a wafer manufacturing control system;

a base supporting the stage, the base being allowed to move in response to a reaction force generated by a movement of the stage;

at least one bearing to allow the base to levitate above a stationary surface; and

at least one actuator to control movement of the base, the movement being caused by at least one of a disturbance force and the reaction force, the at least one actuator comprising an actuator disposed adjacent to a side outer surface of the base to generate a correction torque.

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-- 80. (New) A stage assembly for manufacturing semiconductor wafers, comprising:

a stage to position at least one substrate, the stage being moved by a force generator in response to a wafer manufacturing control system;

a base supporting the stage, the base being allowed to move in response to a reaction force generated by the force generator;

a plurality of pneumatic bearings to support the base allowing the base to move relative to a stationary surface, the plurality of pneumatic bearings comprising a first

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layer of pressurized air to allow the base to move linearly along a first axis and a second axis, and to rotate around a third axis, the first, second, and third axes being orthogonal to each other, and a second layer of pressurized air to allow a top flat surface of each of the plurality of pneumatic bearings to conform to an undersurface of the base; and

at least one actuator to control movement of the base, the movement being caused by at least one of a disturbance force and the reaction force.

81. (New) A stage assembly for manufacturing semiconductor wafers, comprising:

a stage to position at least one substrate, the stage being moved in accordance with a wafer manufacturing control system;

a base supporting the stage, the base being allowed to move in response to a reaction force generated by a movement of the stage;

a plurality of pneumatic bearings to allow the base to levitate above a stationary surface, the plurality of pneumatic bearings comprising a first layer of pressurized air to allow the base to move linearly along a first axis and a second axis, and to rotate around a third axis, the first, second, and third axes being orthogonal to each other, and a second layer of pressurized air to allow a top flat surface of each of the plurality of pneumatic bearings to conform to an undersurface of the base; and

at least one actuator to control movement of the base, the movement being caused by at least one of a disturbance force and a reaction force. --

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